AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method of determining a spectral route in an optical telecommunications network ~~(T)~~ between a starting node ~~(ON1)~~ and a destination node ~~(ON6)~~ of the network, the method ~~being characterized in that it comprises~~ comprising:

~~using a conventional routing method to determine~~ determining at least one candidate spatial route ~~(Route 1, Route 2) connecting~~to connect the starting node ~~(ON1)~~ to the destination node via network nodes disposed intermediate between the starting node and the destination node ~~(ON6)~~, ~~each~~ the candidate spatial route consisting of a sequence of spatial route segments, each spatial route segment connecting two nodes of the network directly and being adapted to support a plurality of wavelengths, each wavelength constituting a spectral route segment;

sending a route set-up request message from the starting node to the destination node via the candidate spatial route;

collecting values of parameters characterizing ~~all~~ the spectral route segments in the message as the message traverses ~~along each~~ the candidate spatial route;

receiving the message with the collected parameters values in the destination node; and

~~finally,~~ using an optimization method to process ~~all~~ the collected parameters ~~parameter~~ values in the destination node upon receipt of the message to select ~~a~~ the spectral route and the spatial route that supports ~~it~~ the selected spectral route by selecting the wavelength to be used, or the wavelengths to be used successively, to spectrally connect the starting node to the destination node, ~~wherein the optimization method processes all the collected parameter values in the destination node~~.

2-3. (Cancelled)

4. (Currently Amended) The~~A~~ method according to claim 1, ~~characterized in that~~ wherein the parameters characterizing all of the spectral route segments along each candidate spatial route take account of transparency constraints.

5. (Currently Amended) ~~A~~ The method according to claim 1, ~~characterized in that~~ wherein the parameters characterizing all of the spectral route segments along each candidate spatial route take account of connection capacity constraints.

6. (Currently Amended) The~~A~~ method according to claim 1, ~~characterized in that~~ wherein the parameters characterizing all of the spectral route segments along each candidate spatial route take account of quality of service constraints.

7. (Currently Amended) An optical network node for implementing the~~a~~ method according to claim 1, ~~characterized in that it comprises~~ comprising management means for:

receiving a route set-up request message on a predetermined spatial route passing through the node;

adding to the content of the message parameter values concerning spectral routes supported by the spatial route segment immediately one of upstream ~~and/or~~ and downstream of the node on the spatial route, together with parameter values concerning ~~the~~ interfaces of the node; and

forwarding the message modified in this way to another node situated on the spatial route segment immediately downstream of the node and designated by routing information contained in the message.

8. (Currently Amended) An optical network node for implementing the~~a~~ method according to claim 1, the node ~~being characterized in that it comprises~~ comprising management means for:

receiving at least one message containing ~~parameter~~parameters values collected along a candidate spatial route connecting the~~a~~ starting node to the node; and

using an optimization method to process the collected ~~parameter~~parameters values ~~collected in this way along at least the candidate spatial route~~ to select a spectral route by selecting the wavelength to be used, or the wavelengths to be used successively, and~~to~~ connect the starting node to the optical network node.

9. (new) The method according to claim 1, further comprising:

determining sets of wavelengths available along the spatial route segments, from the starting node to the destination node, wherein the values of the collected parameters include identifications of the determined sets of available wavelengths.

10. (new) The method according to claim 9, further comprising:

selecting the spectral route as a transparent route, which uses the same wavelength from the starting node to the destination node and lacks optical to electrical to optical conversion.

11. (new) The method according to claim 9, further comprising:

selecting the spectral route as a combination of transparent sub-paths which spectrally connect one node to another node, wherein each transparent sub-path uses the same wavelength from the one node to the another node and lacks optical to electrical to optical conversion.

12. (new) The optical network node according to claim 7, wherein the method further comprises:

determining sets of wavelengths available for a connection from the optical network node to a downstream node along the spatial route segments, wherein the values of the collected parameters include identifications of the determined sets of available wavelengths.

13. (new) The optical network node according to claim 8, wherein the method further comprises:

determining sets of wavelengths available along the spatial route segments, from the starting node to the destination node, wherein the values of the collected parameters include identifications of the determined sets of available wavelengths.

14. (new) The optical network node according to claim 13, wherein the method further comprises:

selecting the spectral route as a transparent route which uses the same wavelength from the starting node to the destination node and lacks optical to electrical to optical conversion.

15. (new) The optical network node according to claim 13, wherein the method further comprises:

selecting the spectral route as a combination of transparent sub-paths which spectrally connect one node to another node, wherein each transparent sub-path uses the same wavelength from the one node to the another node and lacks optical to electrical to optical conversion.